What Is Claimed Is:

Sub A1

~~1. A powdered metal composite material having a high specific electrical resistance, comprising:~~

~~at least two oxides encapsulating powdered metal particles, the at least two oxides forming at least one common phase.~~

2. The composite material according to claim 1, wherein:

the composite material includes a soft magnetic material.

3. The composite material according to claim 1, wherein:

the powdered metal particles include iron materials.

4. The composite material according to claim 3, wherein:

the powdered metal particles include iron.

5. The composite material according to claim 1, wherein:

the at least one common phase includes one of a glass and one of a mixed oxide having a spinel structure, metal phosphates, and metal silicates.

6. The composite material according to claim 5, wherein:

the mixed oxide includes at least one of Al_2MgO_4 (spinel), Al_2ZnO_4 (zinc spinel), Al_2MnO_4 (manganese spinel), Al_2FeO_4 (iron spinel), Fe_2MgO_4 (magnoferrite), Fe_3O_4(magnetite), Fe_2ZnO_4 (franklinite), Fe_2MnO_4 (jakobsite), Fe_2NiO_4 (trevirite), Cr_2FeO_4 (chromite) and Cr_2MgO_4 (magnochromite).

7. The composite material according to claim 5, wherein:

the metal phosphates include zinc phosphate and iron phosphate.

8. The composite material according to claim 5, wherein:

the metal silicates include $CoSiO_3$.

9. A starting material, comprising:

a powdered metal for production of a powdered metal composite material having a high specific electrical resistance; and

one of at least two first antitack agents having an oxidic pyrolysis residue and at least one second antitack agent having the oxidic pyrolysis residue and an oxidic fine powder.

10. The starting material according to claim 9, wherein:

the at least two first antitack agents and the at least one second antitack agent include at least one of at least one metal soap and at least one of monoesters of phosphoric acid, diesters of phosphoric acid, triesters of phosphoric acid, boric acid, and silicic acid including at least one of long-chain alcohols and polydimethyldisiloxane having modified reactive groups.

11. The starting material according to claim 10, wherein:

the at least one metal soap includes a stearate.

12. The starting material according to claim 10, wherein:

a metal ion in the at least one metal soap includes one of Ca ions, Mg ions, Al ions, Zn ions, Co ions, Fe ions, Ni ions, Cu ions, Mo ions and Mn ions.

13. The starting material according to claim 9, wherein:

the oxidic fine powder includes at least one of at least one metal oxide and silicic acid.

14. The starting material according to claim 13, wherein:

the at least one metal oxide includes one of Fe_2O_3, NiO, ZnO, CoO, MnO, MgO, Cr_2O_3, CuO, MoO_2.

15. The starting material according to claim 9, wherein:

a particle diameter corresponding to an initial grain size of the oxidic fine powder is less than approximately 1 μm.

16. The starting material according to claim 15, wherein:

the particle diameter is one of less than and equal to approximately 100 nm.

17. The starting material according to claim 9, wherein:

one of a proportion of the at least two first antitack agents and the at least one second antitack agent lies between approximately 0.1 and 2 % by weight, with respect to a weight of the powdered metal, and a sum of proportions of the at least two first antitack agents, the at least one second antitack agent, and the oxidic fine powder lies between approximately 0.2 and 3 % by weight, with respect to the weight of the powdered metal.

18. The starting material according to claim 17, wherein:

the sum of the proportions of the at least two first antitack agents, the at least one second antitack agent, and the oxidic fine powder is one of less than and equal to approximately 2 % by weight.

19. The starting material according to claim 17, wherein:

one of the proportion of the at least two first antitack agents and the at least one second antitack agent and a sum of the proportions of the at least two first antitack agents, the at least one second antitack agent, and the oxidic fine powder lies between approximately 0.5 and 1.5 % by weight.

20. A method for producing a composite material having a high specific electrical resistance, the method comprising:

pressing a starting material to form a molded article;

pyrolyzing antitack agents to oxides by performing a heating in a nonreducing atmosphere; and

causing the oxides to react with one another to form at least one common phase.

21. The method according to claim 20, wherein:

one of a chemical compound and a glass is produced as the at least one common phase.

22. The method according to claim 21, wherein:

a proportion of added amounts of one of the antitack agents and a combination of the antitack agents and a fine powder is approximately stoichiometric with respect to at least one specific compound to be formed in response to the reaction of the oxides.

23. The method according to claim 20, further comprising:

heating the molded article to a temperature distinctly below a sintering temperature of a powdered metal.

24. The method according to claim 23, wherein:

the powdered metal contains iron materials and is heated to a temperature distinctly less than 1150^0 C.

25. The method according to claim 24, wherein:

the heating of the molded article is performed to a temperature less than approximately 800^0 C.

26. The method according to claim 25, wherein:

the heating of the molded article is performed to a temperature between approximately 150^0 and 550^0 C.

27. The method according to claim 20, wherein:

the heating of the molded article is performed in a nonreducing atmosphere.

28. The method according to claim 27, wherein:

the heating of the molded article is performed in one of a nitrogen-containing atmosphere and an argon-containing atmosphere.

29. The composite material according to claim 5, wherein:

the glass includes one of a silicate and a boron-containing glass.

30. The starting material according to claim 9, wherein:

the powdered metal composite includes at least two oxides encapsulating powdered metal particles, the at least two oxides forming at least one common phase.

31. The method according to claim 20, wherein:

the composite material includes at least two oxides encapsulating powdered metal particles, the at least two oxides forming at least one common phase, and the starting material includes one of at least two antitack agents having an oxidic pyrolysis residue and at least one antitack agent having the oxidic pyrolysis residue and an oxidic fine powder.